Morris Liss
Connolly Bove Lodge & Hutz
1990 M St NW
Suite 800
Washington DC 20036
Phone (866) 240-2798
Fax   (202) 293-6229
E-mail ml@cblhlaw.com

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Re: SN 09/343,684

To: Examiner S. Vincent

For our interview of September 11 at 10:30-11AM I have attached my proposed amendments to claims 10 and 12, the remaining claims 12-18 remaining unchanged.

I will call you in the morning.

Thank you,
Morris Liss

Unofficial claim amendment for 09/343684

10. (Amended) A system for continually controlling the melting of a glass batch in a glass melting furnace and comprising:

a plurality of sensors for continually detecting different types of operating conditions in a furnace;

means for continually creating, and analyzing images taken inside a furnace in accordance with a predetermined mathematical model;

a predictive network which, depending on the state of the furnace and information regarding changes in production over time, defines various set point values assigned to furnace actuators;

means for storing operator set points corresponding to manual operation of furnace actuators under preselected conditions;

fuzzy logic controller means for continually running a fuzzy logic control algorithm and connected at a plurality of respective inputs to the sensors, image means, predictive network, and operator set points storing means, the controller means continually generating a plurality of output signals for the respective actuators that will control melting in the furnace.

12. (Amended) The system set forth in claim 10 wherein the means for creating, and analyzing images further comprises at least one video camera; and means for processing images obtained from the camera and producing information therefrom that is continually input to the algorithm.

13. The system set forth in claim 10 wherein the predictive network delivers information for defining the set points that are to be applied to actuators.

14. The system set forth in claim 10 wherein the predictive network further comprises means for learning operating laws of the furnace, wherein the learning means is operated

in accordance with a computer model of the numerical model type, making it possible to define the laws of furnace operation, selectively from a learning phase of the predictive network from actual furnace operation, or by simulation of furnace operation using a mathematical model.

15.   The system set forth in claim 12 wherein the camera is positioned in the furnace to observe the distribution of glass batch fed into the furnace, of the position of the batch piles and of their speed, and a plurality of parameters relating to the appearance of the batch as it melts on the surface of the glass melt.

16.   The system set forth in claim 12 wherein the camera is positioned in the furnace to observe the shape and distribution of flames from burners inside the furnace.

17.   The system set forth in claim 12 wherein the camera is positioned in the furnace to observe the movement of convection currents in the glass melt.

18.   The system set forth in claim 12 wherein the camera is positioned in the furnace to observe the operation of bubblers in the furnace.